

CLAIMS:

Sub B3
1. A semiconductor device (20) having a substrate (1) on a first side (2) of which there are provided a first semiconductor element (3) and at least one security coating (14) which comprises a powdery filler incorporated in a matrix, characterized in that
5 - the difference between the ~~relative~~ index of the powdery first filler and that of the matrix is at least 0.3, and
- the coating comprises a second filler which is a substantial absorber of radiation of wavelengths at least in the range of from 800 to 1400 nm and is free of heavy metals.

Sub B2
10 A 2. A semiconductor device (20) as claimed in Claim 1, ^{wherein} ~~characterized in that~~ the second filler comprises TiN.

A 3. A semiconductor device (20) as claimed in Claim 1 ^{wherein} ~~or 2, characterized in that~~ the first filler comprises TiO₂.

15 A 4. A semiconductor device (20) as claimed in Claim 1, ^{wherein} ~~characterized in that~~ the matrix of the security coating comprises monoaluminumphosphate.

A 5. A semiconductor device (20) as claimed in Claim 4, ^{wherein} ~~characterized in that~~ the security coating has a thickness of less than 3 μm.

20 A 6. A semiconductor device (20) as claimed in Claim 1, ^{wherein} ~~characterized in that~~ it includes a light-sensitive element and an element containing data, which elements are covered by the security coating (14) and which light-sensitive element, after damaging of the coating, reacts to exposure to visible light by inducing a permanent change of state of the element
25 containing data.

A 7. A semiconductor device (20) as claimed in Claim 1, ^{wherein} ~~characterized in that~~ it includes a light-sensitive element and an electrically programmable element containing data, which elements are covered by the security coating (14) and which light-sensitive element,

18. A smartcard provided with a semiconductor device (20) comprising a memory and a security coating (14) which comprises a powdery first filler incorporated in a matrix, characterized in that

- the coating comprises a second filler which is an absorber of radiation of a wavelength in the range of from 800 to 1400 nm, and
- the difference between the refractive index of the first filler and that of the matrix is at least

10 0.3.

[illegible]